

Set Name Query

side by side

Hit Count Set Name

result set

DB=USPT; PLUR=YES; OP=ADJ

<u>L13</u>	L4 and (cable adj1 modem\$)	0	<u>L13</u>
<u>L12</u>	L4 and (mac)	0	<u>L12</u>
<u>L11</u>	L4 and (mac\$ or (cable adj1 modem\$))	1	<u>L11</u>
<u>L10</u>	L4 and (mac\$ or (cable adj1 modem\$))	1	<u>L10</u>
<u>L9</u>	L4 and (Application\$)	0	<u>L9</u>
<u>L8</u>	L4 and ((layer\$ or hierarchical) with protocol\$)	1	<u>L8</u>
<u>L7</u>	L4 and ((layer\$ or hierarchical)protocol\$)	1	<u>L7</u>
<u>L6</u>	L4 and (protocol\$)	1	<u>L6</u>
<u>L5</u>	L4 and packet\$	1	<u>L5</u>
<u>L4</u>	6377990.pn.	1	<u>L4</u>
<u>L3</u>	L2 and ((compar\$ with address\$) same (substitute\$ or replace\$))	0	<u>L3</u>
<u>L2</u>	(6657991 or 6654957 or 6618387 or 6553568 or 6351773 or 6240464 or 6189102).pn.	7	<u>L2</u>
<u>L1</u>	(6657991 or 6654957 or 6618387 or 6553568 or 6351773 or 6240464 or 6189102).pn.	5	<u>L1</u>

END OF SEARCH HISTORY

 Set Name Query

side by side

Hit Count Set Name

result set

DB=USPT; PLUR=YES; OP=ADJ

<u>L5</u>	L1 and (customer adj1 premise adj1 equipment\$).ab.	7	<u>L5</u>
<u>L4</u>	L2 and (network adj1 filter\$)	0	<u>L4</u>
<u>L3</u>	L2 and (compar\$ with address\$ with (substitut\$ or replac\$))	0	<u>L3</u>
<u>L2</u>	L1 and (customer adj1 premise adj1 equipment\$)	41	<u>L2</u>
<u>L1</u>	(cable adj1 modem\$).ab.	134	<u>L1</u>

END OF SEARCH HISTORY

Cable Modem . ab .

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
	<i>DB=USPT; PLUR=YES; OP=ADJ</i>		
<u>L3</u>	L2 and ((compar\$ with address\$) same (substitute\$ or replace\$))	0	<u>L3</u>
<u>L2</u>	(6657991 or 6654957 or 6618387 or 6553568 or 6351773 or 6240464 or 6189102).pn.	7	<u>L2</u>
<u>L1</u>	(6657991 or 6654957 or 6618387 or 6553568or 6351773 or 6240464 or 6189102).pn.	5	<u>L1</u>

END OF SEARCH HISTORY

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 7 of 7 returned.**☐ 1. Document ID: US 6657991 B1

L5: Entry 1 of 7

File: USPT

Dec 2, 2003

DOCUMENT-IDENTIFIER: US 6657991 B1

TITLE: Method and system for provisioning network addresses in a data-over-cable system

Abstract Text (1):

A method and system for provisioning network addresses in a data-over-cable system. Provisioning of network addresses allows multiple "always-on" network devices with multiple associated devices to be used on a data-over-cable system with a limited public network address pool. The "always-on" network devices provide services, such as, Voice over Internet Protocol ("VoIP"), that typically require instant access to data-over-cable system. Network devices such as "always-on" cable modems may allocated private network addresses (e.g., Internet Protocol addresses) on the data-over-cable system. The private network addresses are not addressable outside the data-over-cable system. Other network devices associated with the cable modems, such as customer premise equipment, may be allocated public network addresses (e.g., Internet Protocol Addresses) on the data-over-cable system. The public network addresses are addressable outside the data-over-cable system. The network address provisioning is accomplished by selecting a private network address marker and a public network address marker for selected network devices and using an extended Address Resolution Protocol table to determine a device type. The private network address marker or public network address marker is added to a Dynamic Host Configuration Protocol message field by a cable modem termination system. A Dynamic Host Configuration Protocol server uses the private or public address marker to allocate a private network address or a public network address on the data-over-cable system. The provisioning of network addresses allows two or more virtual networks to be created on the data-over-cable system, and may reduce a number of public network addresses required for a data-over-cable system.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMC	Draw Desc	Image
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☐ 2. Document ID: US 6654957 B1

L5: Entry 2 of 7

File: USPT

Nov 25, 2003

DOCUMENT-IDENTIFIER: US 6654957 B1

TITLE: Real time device polling for multiplexed transmission

Abstract Text (1):

A real time device polling method for multiplexed transmission of on/off constant bit rate data, such as voice data from a telephone call, over a cable data network is disclosed. The network serves as a shared bus for both the downstream and upstream traffic. The upstream channel is modeled as a stream of mini-slots. A cable modem termination system at the head end supports a number of cable modems attached

to the cable network and connected to customer premises equipment. Allocation maps are transmitted on the downstream channel to the cable modems to define transmission opportunities on the upstream channel. The cable modem termination system polls the cable modems in an efficient way such that the overhead associated with the polling is minimized, and the availability of data transmission slots is synchronized with the data packet generation by the codec for the cable modem, which minimizes delay.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 6618387 B1

L5: Entry 3 of 7

File: USPT

Sep 9, 2003

DOCUMENT-IDENTIFIER: US 6618387 B1

TITLE: Interface for abstracting control of a cable modem

Abstract Text (1):

Provided is a system and method for integrating a cable modem with a host customer premises equipment, such as a computer or set top box. An interface is provided which receives data packets from the cable modem of any manufacturer and transmits the data packet to a media access control layer. The media access control layer determines the destination of the data packet and forwards it to that destination, which may be the cable modem or may be the host computer of the cable modem or any other customer premises equipment networked with the host computer. The interface also receives data packets from the media access control layer and transmits the data packets to the cable modem for transmission upstream. The interface abstracts the control of the cable modem to the media access control layer. The system maintains a protocol stack for the cable modem that is separate from the protocol stack associated with the operating system of the host computer. The cable modem and the host computer are separately addressable by the cable network. Furthermore, the cable modem shares the processor and resources of the host computer.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 4. Document ID: US 6553568 B1

L5: Entry 4 of 7

File: USPT

Apr 22, 2003

DOCUMENT-IDENTIFIER: US 6553568 B1

TITLE: Methods and systems for service level agreement enforcement on a data-over cable system

Abstract Text (1):

Methods and system for service level agreement enforcement on a data-over-cable system. One or more service level agreements are created including one or more class-of-service or quality-of-service parameters. A pool of Internet Protocol addresses is allocated for the one or more service level agreements. Configuration files including service level agreement parameters are used to initialize cable modems or customer premise equipment. When a cable modem or customer premise equipment requests use of a service level agreement, an Internet Protocol address from the pool of Internet Addresses associated with a desired service level agreement is assigned. The service level agreements are enforced using the Internet Protocol address from a cable modem termination system including an integral switch cable access router and a bandwidth manager. The cable modem termination system with

integral components are duplicated to provide a "hot back" up in case of failure and increase reliability for using service level agreements. The cable access router enforces maximum rate limits for service level agreements. The switch switches data streams from external networks from the data-over-cable system. The bandwidth manager provides class-of-service or quality-of-service services with policy management and detects network trends, measures network response time and generates reports. The bandwidth manager also monitors, regulates and shapes traffic based on service level agreement requests at a data-link layer level. The methods and system allow service level agreements to be used on a data-over-cable system without adversely affecting performance or throughput on the data-over-cable system. The methods and system may also help provide service level agreements in a data-over-cable system in a more reliable manner.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 5. Document ID: US 6351773 B1

L5: Entry 5 of 7

File: USPT

Feb 26, 2002

DOCUMENT-IDENTIFIER: US 6351773 B1

**** See image for Certificate of Correction ****

TITLE: Methods for restricting access of network devices to subscription services in a data-over-cable system

Abstract Text (1):

Methods for providing restricted access for a network device such as a cable modem or customer premise equipment on a data-over-cable system. An unknown or new network device is assigned a restricted network address such as a restricted Internet Protocol address. The restricted network address allows the network device to access less than all of the available features on the data-over-cable system. A connection timer is started on the data-over-cable system for a restricted connection to the network device. The connection timer restricts access to the data-over-cable system over a timed interval. A restricted connection is created between the data-over-cable system and the network device including the temporary restricted network address and the connection timer, thereby providing restricted access to the data-over-cable system over a timed interval. The methods may allow a data-over-cable system to provide restricted connections to unknown or new network devices without a long delay, yet provide security to the data-over-cable system.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 6. Document ID: US 6240464 B1

L5: Entry 6 of 7

File: USPT

May 29, 2001

DOCUMENT-IDENTIFIER: US 6240464 B1

TITLE: Method and system for managing addresses for network host interfaces in a data-over-cable system

Abstract Text (1):

A method and system for managing addresses of network host interfaces in a data-over-cable system such as Internet Protocol interfaces. The method allows network host interfaces addresses to be removed from routing tables on network

devices such as cable modems or customer premise equipment when their lease expires. This helps prevent the data-over-cable system from exhausting available network host interface addresses of the data-over-cable system. In addition, the method helps ensure that transactions are not conducted on a network host interface address in the data-over-cable system unless it has a valid lease in the one or more routing tables on network devices.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 7. Document ID: US 6189102 B1

L5: Entry 7 of 7

File: USPT

Feb 13, 2001

DOCUMENT-IDENTIFIER: US 6189102 B1

**** See image for Certificate of Correction ****

TITLE: Method for authentication of network devices in a data-over cable system

Abstract Text (1):

A method for authentication of network devices in a data-over-cable system is provided. The method includes storing a network address for customer premise equipment and a network address for a cable modem associated with the customer premise equipment in an internal table on a cable modem termination system during an initialization sequence for the customer premise equipment. If the cable modem termination system has to re-boot, or has to re-establish a connection to a cable modem, the internal table is used to prevent the cable modem from registering "rogue" network devices associated with a cable modem on the cable modem termination system. The authentication method allows a cable modem termination system to authenticate customer premise equipment or other network devices associated with a cable modem using internal tables. This authentication helps improve the security of a data-over-cable system and makes it less vulnerable to attack.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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